CONVERSION OF VISITOR SIDE PRIVATE "DRY" FIRE LINE SYSTEM TO PRIVATE "WET" SYSTEM

CURRENTLY, THERE IS A SIAMESE STANDPIPE ON THE NORTHERN SIDE OF THE SCHOOL ACCESS ROAD, AND ANOTHER IMMEDIATELY EAST OF THE VISITOR STANDS. THESE TWO STANDPIPES ARE INTERCONNECTED WITH A SIX-INCH WATERLINE THAT WAS INSTALLED AND PRESSURE-TESTED AT THE TIME OF THE ORIGINAL STADIUM CONSTRUCTION, SUCH THAT A PUMPER TRUCK COULD ENERGIZE THE LINE FROM THE ACCESS ROAD, AND FIREFIGHTERS COULD CONNECT HOSES ONTO THE STANDPIPE INSIDE THE STADIUM.

WITH THE PROPOSED CONSTRUCTION OF THE FIELD HOUSE, AND THE MORE INTENSE OCCUPANCY THAN WAS EXPERIENCED WITH ONLY CONCESSIONS AND RESTROOMS, IT IS REQUIRED THAT WE CONVERT THIS SOUTHERN "DRY" FIRE LINE INTO A "WET" FIRE LINE, AND ALSO INSTALL A NEW FIRE HYDRANT ASSEMBLY ON THE EXTERIOR OF THE STADIUM FENCING. IN ORDER TO ACHIEVE THIS, THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED TO:

1. AT SCHOOL ACCESS ROAD
   - 1.1. PERFORM SITE DEMOLITION AS OUTLINED ON SHEET C-02, TO REMOVE THE TWO STANDPIPES & CONCRETE PADS, AND PERFORM SELECTIVE DEMOLITION OF GROUND COVERS NECESSARY TO PERFORM AN INTERCONNECTION OF THE EXISTING SIX-INCH LINE TO THE EXISTING EIGHT-INCH WATER MAIN IN THE ACCESS ROAD.
   - 1.2. WET-TAP THE EXISTING EIGHT-INCH WATER MAIN WITH A NEW SIX-INCH TAPPING SLEEVE ASSEMBLY. ALL MATERIALS AND LABOR BY CONTRACTOR, ACTUAL PENETRATION OF WATER MAIN BY WESTERN VIRGINIA WATER AUTHORITY.
   - 1.3. PROVIDE AND INSTALL A NEW FIRE SERVICE VAULT FOR PRIVATE FIRE HYDRANT, SEE DETAIL W-8, SHEET C-07 ADJACENT TO THE WET-TAP ASSEMBLY.
   - 1.4. INTERCONNECT EXISTING SIX-INCH DUCTILE IRON PIPE WITH NEW SIX-INCH DUCTILE IRON PIPE (MIN. CLASS 52). PROVIDE ADAPTERS / FITTINGS AS REQUIRED.
   - 1.5. REPLACE BITUMINOUS PAVEMENT, MATCHING STONE / BASE ASPHALT / WEAR COURSE THICKNESSES WITH NEW VDOT 21A BASE STONE / BM25.0 BITUMINOUS BINDER COURSE, AND VDOT SM9.5A BITUMINOUS WEAR COURSE, AS APPLICABLE.
2. AT EASTERN END OF VISITOR STANDS
   - 2.1. INSTALL NEW WVWA STANDARD FIRE HYDRANT / VALVE ASSEMBLY IN PLACE OF THE STANDPIPE REMOVED AT THE EASTERN END OF THE VISITOR STANDS. PROVIDE A MINIMUM 4'x4'x6" THICK CONCRETE PAD, WITH TOP OF PAD MATCHING ADJACENT CONCOURSE LEVEL. NEW PRIVATE FIRE HYDRANT SHALL BE EQUIPPED WITH A 5" STORZ CONNECTION AS THE LARGE-DIAMETER NOZZLE IN LIEU OF THE 4 ½" LARGE-DIAMETER NOZZLE. BARREL SHALL BE PAINTED SILVER.
   - 2.2. RESTORE AND PERMANENTLY SEED (INCLUDING STRAW-MULCH AND WATERING) AFFECTED AREAS.
3. AT LOCATION OF NEW FIRE HYDRANT OUTSIDE THE STADIUM FENCE
   - 3.1. INSTALL A NEW CUT-IN SIX-INCH TEE ON THE EXISTING "DRY" LINE AT THE LOCATION INDICATED HEREON. INSTALL ±105' OF NEW SIX-INCH DUCTILE IRON PIPE AND A NEW WVWA STANDARD FIRE HYDRANT ASSEMBLY AS SHOWN. NEW PRIVATE FIRE HYDRANT SHALL BE EQUIPPED WITH A 5" STORZ CONNECTION AS THE LARGE-DIAMETER NOZZLE IN LIEU OF THE 4 ½" LARGE-DIAMETER NOZZLE. BARREL SHALL BE PAINTED SILVER.
   - 3.2. RESTORATION OF AFFECTED AREAS SHALL BE PERFORMED DURING THE TIME OF SEEDING / PAVING FOR OVERALL PROJECT.
4. PERFORM PRESSURE TESTING, DISINFECTION AND FLUSHING OF ENTIRE WET SYSTEM IN ACCORDANCE WITH WVWA REQUIREMENTS. FOR THE PURPOSES OF BIDDING, THE CONTRACTOR SHALL ASSUME THOSE PORTIONS OF THE EXISTING "DRY" WATERLINE WILL PASS NORMAL PRESSURE-TESTING WITHOUT ADDITIONAL WORK.

ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WESTERN VIRGINIA WATER AUTHORITY

ADDED

FIRE HYDRANT FLOW DATA (EXISTING)

EXISTING HYDRANT LOCATED OUTSIDE SCHOOL CAFETERIA
WVWA DESIGNATION P10052 (PRIVATE)
FLOW DATA OBTAINED 09/15/2020 BY FIRE & LIFE SAFETY AMERICA, INC.
STATIC PRESSURE = 80 psi
FLOW = 872 gpm w/ 36 psi RESIDUAL
CWA COMPUTED FLOW AT 20 psi RESIDUAL = 1,031 gpm

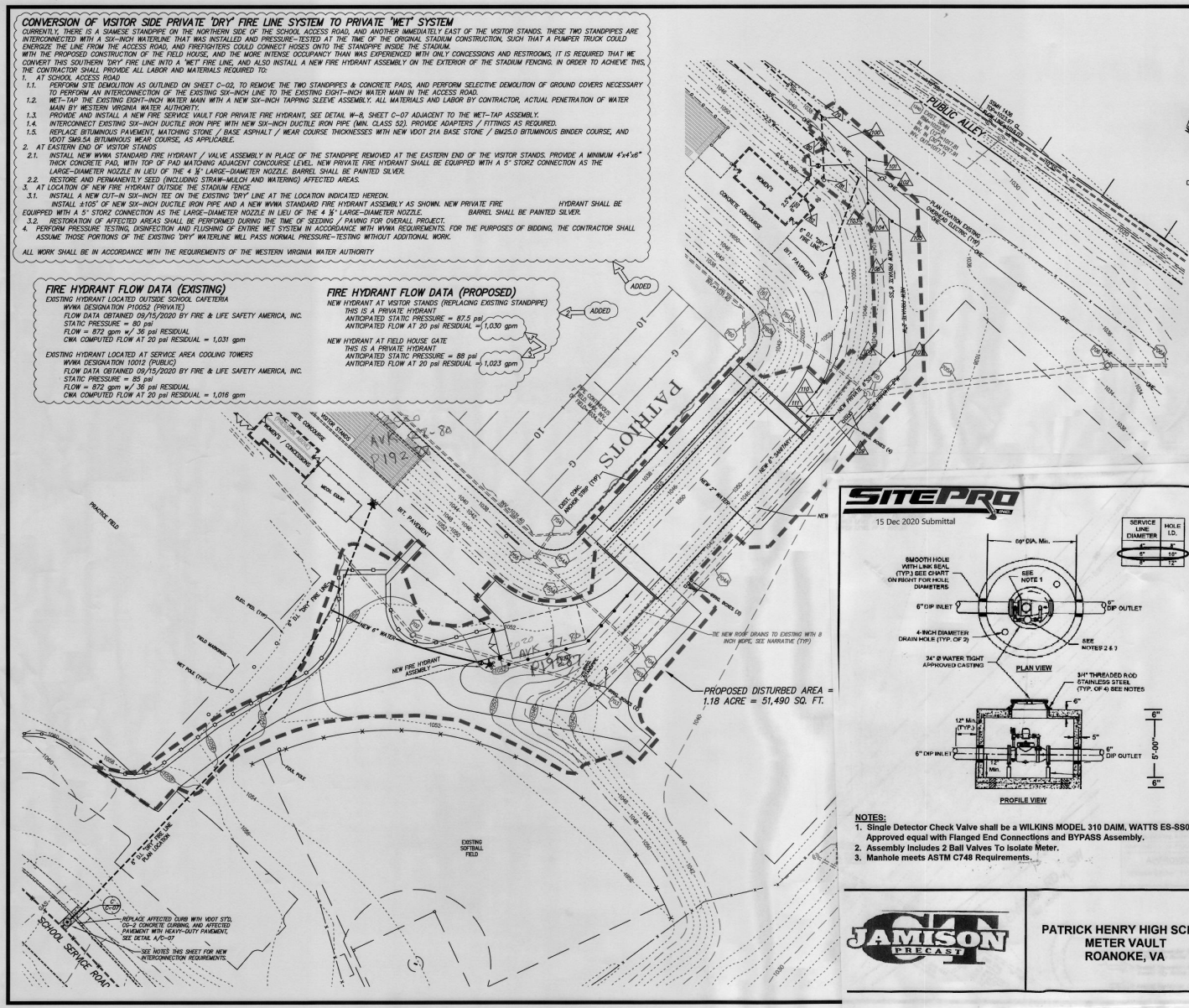
EXISTING HYDRANT LOCATED AT SERVICE AREA COOLING TOWERS
WVWA DESIGNATION 10012 (PUBLIC)
FLOW DATA OBTAINED 09/15/2020 BY FIRE & LIFE SAFETY AMERICA, INC.
STATIC PRESSURE = 85 psi
FLOW = 872 gpm w/ 36 psi RESIDUAL
CWA COMPUTED FLOW AT 20 psi RESIDUAL = 1,016 gpm

FIRE HYDRANT FLOW DATA (PROPOSED)

NEW HYDRANT AT VISITOR STANDS (REPLACING EXISTING STANDPIPE)
THIS IS A PRIVATE HYDRANT
ANTICIPATED STATIC PRESSURE = 87.5 psi
ANTICIPATED FLOW AT 20 psi RESIDUAL = 1,030 gpm

NEW HYDRANT AT FIELD HOUSE GATE
THIS IS A PRIVATE HYDRANT
ANTICIPATED STATIC PRESSURE = 88 psi
ANTICIPATED FLOW AT 20 psi RESIDUAL = 1,023 gpm

ADDED



NEW PRIVATE WATER LATERAL

CONSTRUCT NEW 2 INCH WATER LATERAL, INTERCONNECTING AS SHOWN ON PLANS WITH A 2-1/2" X 2-1/2" X 2" CUT-IN TEE. PROVIDE NEW 2 INCH ISOLATION VALVE AT NEW TEE, WITH NEW VALVE BOX SET AT-GRADE. ALL WATERLINE MATERIALS, FABRICATION AND INSTALLATION SHALL CONFORM TO THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS. TEMPORARILY CAP NEW WATER LATERAL 5 FEET OUTSIDE NORTHERN FACE OF NEW FIELD HOUSE FOR PLUMBER INTERCONNECTION.

CLARIFICATION PROVIDED THAT NEW WATER & SANITARY LATERALS ARE PRIVATE

△ SANITARY SEWER SCHEDULE △

NEW SANITARY SEWER LATERAL IS PRIVATE.

ALL NEW SANITARY SEWER MATERIALS SHALL BE SDR-35 PVC, AND SHALL BE INSTALLED IN ACCORDANCE WITH WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS, LATEST EDITION. ALL CLEANOUT ASSEMBLIES SHALL BE THE SAME SIZE AS THE CARRIER LINE THEY SUPPORT.

AS A FIRST STEP, THE CONTRACTOR SHALL FIELD-VERIFY THE INVERT ELEVATION OF THE EXISTING SEWER LATERAL AT THE POINT OF INTERCONNECTION. NOTIFY THE ENGINEER IMMEDIATELY IF THE INVERT ELEVATION IS HIGHER THAN INDICATED HERE, AS ALTERNATE DESIGNS MAY BE REQUIRED.

79	EXIST. SSCO, INV.=1033.30
80	EXIST. 42"-6" SS @ 8.81%
81	EXIST. SSCO, INV.=1037.00
82	EXIST. 6" SS @ 1.04 % MIN.
100	PROVIDE 40'-NEW 6" SS AT 1.04%, INV. OUT =1033.30. RECONSTRUCT EXISTING CLEANOUT #79 TO BE AN IN-LINE CLEANOUT
101	PROVIDE NEW SSCO, INV.=1033.72
102	PROVIDE 30'-NEW 6" SS AT 1.04%
103	PROVIDE NEW SSCO, INV.=1034.03
104	PROVIDE 22' NEW 6" SS AT 1.04%
105	PROVIDE NEW SSCO, INV.=1034.25
106	PROVIDE 90'-NEW 6" SS AT 1.04%
107	PROVIDE NEW SSCO, INV.=1035.19
108	PROVIDE 60'-NEW 6" SS AT 1.04%
109	PROVIDE NEW SSCO, INV.=1035.81
110	PROVIDE 18'-NEW 6" SS AT 1.04%
111	PROVIDE NEW SSCO, INV.=1036.00

LIGHTING & UNDERGROUND UTILITY NOTES

COORDINATE WITH ELECTRICAL SHEETS OF BUILDING PLANS RELATIVE TO RELOCATION OF EXISTING UNDERGROUND ELECTRIC, AS WELL AS MAIN POWER SUPPLY FOR NEW FIELD HOUSE. NOTIFY ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY CONDITIONS THAT WILL CONFLICT WITH THE REQUIREMENTS OF THESE SITE PLANS.

ALL NEW OR RELOCATED UTILITIES, LATERALS & SERVICE LINES SHALL BE INSTALLED UNDERGROUND, PER CITY ZONING REQUIREMENTS.

AS A CONDITION ON THE AMENDED ZONING DEVELOPMENT PLAN, THERE ARE NO CHANGES OR ADDITIONS TO THE EXISTING STADIUM LIGHTING, AND WILL BE NO ADDITIONAL ATHLETIC FIELD LIGHTING (REPEATED HEREON FOR APPROVAL PURPOSES)

PLAN SHEET REVISED TO REFLECT THE CHANGE FROM A "DRY" STANDPIPE SYSTEM TO A "WET" SYSTEM WITH A NEW FIRE HYDRANT ASSEMBLY, AS WELL AS A NEW BRANCH 6" WATERLINE WITH NEW FIRE HYDRANT ASSEMBLY.

PLAN SHEET REVISED TO RELOCATE NEW WATER AND SANITARY LATERAL ALIGNMENTS, TO AVOID CONSTRUCTION IN THE BERM TO THE EXTENT POSSIBLE.

30' 0' 30' 60' 1" = 30'
GRAPHIC SCALE

SITEPRO
15 Dec 2020 Submittal

SERVICE LINE DIAMETER	HOLE I.D.
4"	8"
6"	10"
8"	12"

NOTES:
1. Single Detector Check Valve shall be a WILKINS MODEL 310 DAIM, WATTS ES-SS07F-BP,CR Approved equal with Flanged End Connections and BYPASS Assembly.
2. Assembly Includes 2 Ball Valves To Isolate Meter.
3. Manhole meets ASTM C748 Requirements.

JAMISON PRECAST

PATRICK HENRY HIGH SCHOOL
METER VAULT
ROANOKE, VA

COMMONWEALTH OF VIRGINIA
CORBIN L. WHITE
License No. 23843
11-19-2020
PROFESSIONAL ENGINEER

SITE UTILITY PLAN
FOR
NEW PATRICK HENRY HS FIELD HOUSE AND ACCESS DRIVE
FOR
ROANOKE CITY PUBLIC SCHOOLS
PREPARED FOR
INTERACTIVE DESIGN GROUP
SITUATE 2102 GRANDIN ROAD, SW
CITY OF ROANOKE, VIRGINIA

C.L. White	
C.L. White	
May 27, 2020	
1" = 30'	
1460201	
N/A	
20-0022	

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